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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,932	03/08/2006	Craig Polta	1200316N US	8953
35227	7590	11/24/2008		
POLYONE CORPORATION 33587 WALKER ROAD AVON LAKE, OH 44012			EXAMINER SANDERS, KRIELLION ANTIONETTE	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			11/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/570,932

Applicant(s)

POLTA ET AL.

Examiner

Kriellion A. Sanders

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The rejections are repeated for reasons of record.

Claims 1-20 are rejected under 35 U.S.C. 103 (a), as being unpatentable over De Vries et al, US Patent No. 3,171,827.

Devries et al discloses reflective granules that are useful for highway markings and a method for making them. The granules are made from glass spheres and a thermoplastic or thermoset binder material such as polyester, polystyrene or epoxy resins. The binders may be any suitable to form a rigid mass as described. See col. 5, lines 45-51. ASA would therefore have been an obvious selection to the art-skilled at the time of applicant's invention. The binders may also include pigments, fillers, catalysts, accelerators, solvents and other conventional adjuvants. See col. 1, line 49 through col. 2, line 15. The spheres used in the invention may be coated with a metal such as silver. Or they may be metallic spheres. See col. 4, lines 41-45. Metallic type granular material is used as colorant in the invention. See col. 3, line 65 through col. 4, line 4. Devries et al indicates that metallic aluminum flake may be incorporated into the binder for reflexivity. See col. 5, lines 25 through 34. The ordinary practitioner of the art would find it

obvious to determine the most appropriate percentage of flake to use to derive the desired properties based upon the suggested ratios of the remaining components.

To incorporate the glass spheres and metallic flakes in a manner wherein they impart retroreflectivity on all surfaces and throughout the bulk of the article would have been an obvious choice in the production of the granules if maximum reflectivity were desired at the time of the invention. The polymer acrylic-styrene acrylonitrile is considered an obvious derivative of the styrene polymers generically suggested by Patentee.

Claims 1-20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Spencer et al, US Patent No. 6,525,111.

Spencer et al discloses refractive paint compositions that are useful for marking automobiles and boats and to improve visibility road signs and emergency vehicles, etc. See col. 4, lines 30-56. The paint are made from curable binders, metal flakes glass spheres and pigments wherein the binder may be a thermoplastic or thermoset binder material such as polyester, acrylic, urethane and epoxide resins. The binders may be any suitable to form a water or solvent-based system as described. See col. 2, lines 43-59 and col. 5, lines 17-26 and 45-51. ASA would therefore have been an obvious selection to the art-skilled at the time of applicant's invention. The binders may also include pigments, fillers, catalysts, accelerators, solvents and other conventional adjuvants. See the abstract and claims 1 and 4.

To incorporate the glass spheres and metallic flakes in an amount and manner wherein they impart retroreflectivity on all surfaces and throughout the bulk of the article would have been an obvious choice in design for the ordinary practitioner of this art if maximum reflectivity

were desired at the time of the invention. The use of an acrylic-styrene acrylonitrile polymer is an obvious derivative of the acrylic polymers suggested generically by Patentee. Aluminum is an obvious choice of metal flake. Also see Example 1 and Example 2 which illustrate that the aluminum flakes are used in an amount of about 0.1% of the compound.

Response to Arguments

1. Applicant's arguments filed 8/06/08 in reference to both references relied upon have been fully considered but they are not persuasive. First, all "articles" are considered three-dimensional. Applicant's amendment incorporating the language, "article" does not serve to differentiate over the prior art.

2. Applicant argues that De Vries et al. does not provide motivation to make a retroreflective article as claimed by Applicants, in which the goal of the molded or extruded product is to provide retroreflectivity on all surfaces of the three dimensions and throughout the bulk thereof, if for some reason, the outersurface were scraped away. This argument is not persuasive because Devries et al indicates that metallic aluminum flake may be incorporated into the binder for reflexivity. See col. 5, lines 25 through 34. This would result in the metallic flake being distributed throughout the resulting article. Therefore DeVries et al provides for retroreflectivity on all surfaces of the three dimensions and throughout the bulk thereof, if for some reason, the outersurface were scraped away.

Applicant has not clearly shown unexpected results in the amount of metal flakes incorporated into the present articles as compared to those of the prior art relied upon. Applicant's comparative data as presented at page 7 of the specification is not commensurate in scope with the present invention. And applicant's findings are not presented in a manner that is convincing,

Applicant simply states at page 7 of the specification that a qualitative view by those of ordinary skill in the art immediately revealed that Example 1 was much more retroreflective than Comparative Example A, approximately 30-50% on the ungrained surface. This summation of applicant's findings is considered to be subjective and is not measurable by quantitative means.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders
Primary Examiner
Art Unit 1796

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